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Letitia A. McIntosh

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PREFACE

A 1982 article

Nuclear winter research began approximately two years before the theory was publicly announced. An article by P. J. Crutzen and J. W. Birks (Ambio, Vol. 11, No. 2-3, 1982) first suggested that smoke from wildland and urban fires could have a significant impact on the atmosphere. The theory of nuclear winter was first presented at the "World after Nuclear War" conference held in Washington, D.C., from 31 October to 1 November 1983. Following the conference, Science (Vol. 222, No. 4630, 23 December 1983) published two articles describing the potential climatic (R. P. Turco et al.) and biological (P. R. Ehrlich et al.) consequences of a global nuclear exchange. Most of the nuclear winter literature concentrates on atmospheric and climatic effects. There are also some works that focus on strategic policy, medical, and agricultural effects, but in smaller quantity.

A broad spectrum of viewpoints and theories exists in the published literature on nuclear winter. This bibliography reflects those varying viewpoints. Each citation has been thoroughly checked for accuracy and completeness. The material compiled here includes works published up to the publication date of this note (1 March 1987).

Articles from popular magazines and newspapers have been omitted. Citations include,

The published literature on nuclear winter is arranged here as follows: Sec. I contains 129 articles, Sec. II lists 21 books, and Sec. III contains 54 technical reports. A further reading list composed of 80 sources relevant to the nuclear winter theory is given in Sec. IV. It is hoped that this bibliography will aid future nuclear winter research efforts as well as offer a historical perspective on the nuclear winter theory and its development.

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I. ARTICLES

Aleksandrov, V. V., letter to the editor, "Nuclear Winter Studies," Science, Vol. 225, No. 4666, 7 September 1984, p. 978.

-----, "A Soviet View of Nuclear Winter," Chemtech, Vol. 15, No. 11, November 1985, pp. 658-665.

Aleksandrov, V. V., and G. L. Stenchikov, "Numerical Simulation of the Climatic Consequences of a Nuclear War," USSR Comput. Math. Math. Phys., English Transl., Vol. 24, No. 1, 1984, pp. 87-90.

Barton, I. J., and G. W. Paltridge, letter to the editor, "'Twilight at Noon' Overstated," Ambio, Vol. 13, No. 1, 1984, pp. 49-51.

Berger, A., "Nuclear Winter," (in French), La Recherche, Vol. 17, No. 179, 1986, pp. 880-890.

-----, "Nuclear Winter, or Nuclear Fall?" Eos, Vol. 67, No. 32, 12 August 1986, pp. 617-621.

Birks, J. W., "Darkness at Noon: The Environmental Effects of Nuclear War," Sierra, May/June 1983, pp. 58-61.

Birks, J. W., and P. J. Crutzen, "Atmospheric Effects of a Nuclear War," Chem. Britain, November 1983, pp. 927-930.

Broyles, A. A., "Smoke Generation in a Nuclear War," Am. J. Phys., Vol. 53, No. 4, April 1985, pp. 323-332.

Budyko, M. I., "Aerosol Climatic Catastrophes," (in Russian), Priroda, No. 6, 1985, pp. 30-38.

Bush, B. W., and R. D. Small, "On the Ignition of Vegetation by Nuclear Weapons," Combust. Sci. Technol., Vol. 52, No. 1-2, 1987, pp. 25-38.

Carrier, G. F., "Nuclear Winter: The State of the Science," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 114-117.

Cess, R. D., "Nuclear War: Illustrative Effects of Atmospheric Smoke and Dust upon Solar Radiation," Clim. Change, Vol. 7, No. 2, June 1985, pp. 237-251.

Cess, R. D., et al., "The Climatic Effects of Large Injections of Atmospheric Smoke and Dust: A Study of Climate Feedback Mechanisms with One- and Three-Dimensional Climate Models," J. Geophys. Res., Vol. 90, No. D7, 20 December 1985, pp. 12937-12950.

Clawson, P., letter to the editor, "Nuclear Winter," Foreign Affairs, Vol. 62, Spring 1984, pp. 997-998.

Cotton, W. R., "Atmospheric Convection and Nuclear Winter," Am. Scientist, Vol. 73, No. 3, May-June 1985, pp. 275-280.

Covey, C., "Climatic Effects of Nuclear War," Bioscience, Vol. 35, October 1985, pp. 563-569.

-----, letter to the editor, "Protracted Climatic Effects of Massive Smoke Injection Into the Atmosphere," Nature, Vol. 325, No. 6106, 19 February 1987, pp. 701-703.

Covey, C., S. H. Schneider, and S. L. Thompson, "Global Atmospheric Effects of Massive Smoke Injections from a Nuclear War: Results from General Circulation Model Simulations," Nature, Vol. 308, No. 5954, 1 March 1984, pp. 21-25.

Covey, C., S. L. Thompson, and S. H. Schneider, "'Nuclear Winter': A Diagnosis of Atmospheric General Circulation Model Simulations," J. Geophys. Res., Vol. 90, No. D3, 20 June 1985, pp. 5615-5628.

Crutzen, P. J., letter to the editor, "Darkness after a Nuclear War," Ambio, Vol. 13, No. 1, 1984, pp. 52-54.

-----, letter to the editor, "The Global Environment after Nuclear War," Environment, Vol. 27, No. 8, October 1985, pp. 6-11, 34-37.

Crutzen, P. J., and J. W. Birks, "The Atmosphere after a Nuclear War: Twilight at Noon," Ambio, Vol. 11, No. 2-3, 1982, pp. 114-125.

Crutzen, P. J., I. E. Galbally, and C. Bruhl, "Atmospheric Effects from Post-Nuclear Fires," Clim. Change, Vol. 6, No. 4, December 1984, pp. 323-364.

Dehaas, N., et al., "Smoke Scavenging by Atmospheric Ozone as a Possible Factor in the Nuclear Winter Problem," Johns Hopkins Appl. Tech. Digest, Vol. 7, No. 2, April-June 1986, pp. 181-186.

Ehrlich, A., "Nuclear Winter: A Forecast of the Climatic and Biological Effects of Nuclear War," Bull. Atomic Sci., Vol. 40, No. 4, April 1984, pp. 1S-15S.

Ehrlich, P. R., et al., "Long-Term Biological Consequences of Nuclear War," Science, Vol. 222, No. 4630, 23 December 1983, pp. 1293-1300.

Elsom, D. M., "Climatic Change Induced by a Large-Scale Nuclear Exchange," Weather, Vol. 39, No. 9, September 1984, pp. 268-271.

Emanuel, K. A., letter to the editor, "Nuclear Winter: Towards a Scientific Exercise," Nature, Vol. 319, No. 6051, 23 January 1986, p. 259.

Ginzburg, A. S., "Nuclear Winter--A Real Threat to Mankind," (in Russian), SSha: Ekonomika, Politika, Ideologiya, No. 3, March 1985, pp. 50-59.

"Global Atmospheric Effects of Nuclear War," Energy Technol. Review, May 1985, pp. 10-35.

Golding, B. W., et al., letter to the editor, "Importance of Local Mesoscale Factors in Any Assessment of Nuclear Winter," Nature, Vol. 319, No. 6051, 23 January 1986, pp. 301-303.

Golitsyn, G. S., "Possible Atmospheric Consequences of a Nuclear Conflict," (in Russian), Vestnik Akademii Nauk SSSR, No. 9, September 1983, pp. 57-60.

-----, "Consequences of Nuclear War for Atmosphere," (in Russian), Priroda, No. 6, 1985, pp. 22-29.

Golitsyn, G. S., and A. S. Ginsburg, "Comparative Estimates of Climatic Consequences of Martian Dust Storms and of Possible Nuclear War," Tellus Ser. B, Vol. 37B, No. 3, July 1985, pp. 173-181.

Gore, A., letter to the editor, "Nuclear Winter: Strategic Significance," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 120-123.

Goure, L., "'Nuclear Winter' in Soviet Mirrors," Strategic Rev., Vol. 13, Summer 1985, pp. 22-38.

Grime, J. P., "Predictions of Terrestrial Vegetation Responses to Nuclear Winter Conditions," Int. J. Environ. Studies, Vol. 28, No. 1, 1986, pp. 11-19.

Grover, H. D., and M. A. Harwell, "Biological Effects of Nuclear War II: Impact on the Biosphere: The Biosphere's Structural and Functional Integrity Is at Risk," Bioscience, Vol. 35, October 1985, pp. 576-583.

Haberle, R. M., et al., "Global Transport of Atmospheric Smoke Following a Major Nuclear Exchange," Geophys. Res. Lett., Vol. 12, No. 6, June 1985, pp. 405-408.

Harwell, M. A., and T. C. Hutchinson, "Biological Effects of Nuclear War I: Impact on Humans," Bioscience, Vol. 35, October 1985, pp. 570-575.

Herzenberg, C. L., "Nuclear Winter and Strategic Defense Initiative," Phys. Soc., Vol. 15, No. 1, January 1986, pp. 2-5.

Hobbs, P. V., letter to the editor, "'Nuclear Winter' Calculations," Science, Vol. 228, No. 4700, 10 May 1985, p. 648.

Hoeber, F. P., and R. K. Squire, "The 'Nuclear Winter' Hypothesis: Some Policy Implications," Strategic Rev., Vol. 13, Summer 1985, pp. 39-46.

Horowitz, D., and R. J. Lieber, letter to the editor, "Nuclear Winter," Foreign Affairs, Vol. 62, Spring 1984, pp. 995-996.

Idso, S. B., letter to the editor, "Calibrations for Nuclear Winter," Nature, Vol. 312, No. 5993, 29 November 1984, p. 407.

-----, letter to the editor, "Nuclear Winter and the Greenhouse-Effect," Nature, Vol. 321, No. 6066, 8 May 1986, p. 122.

Izrael, Y. A., "The Ecological Consequences of a Possible Nuclear War," Sov. Meteorol. Hydrol., No. 10, 1983, pp. 1-5.

Kapitza, S., "A Soviet View of Nuclear Winter," Bull. Atomic Sci., Vol. 41, No. 9, September 1985, pp. 37-39.

Katz, J., letter to the editor, "Atmospheric Humidity in the Nuclear Winter," Nature, Vol. 311, No. 5985, 4 October 1984, p. 417.

Kearny, C. H., letter to the editor, Science, Vol. 227, No. 4685, 25 January 1985, p. 356, 35^r.

Koozin, A. M., "Consequences of Nuclear War--Views of a Radio-biologist," (in Russian), Priroda, No. 6, 1985, pp. 17-21.

Levi, B. G., "Atmospheric Calculations Suggest a Nuclear Winter," Phys. Today, Vol. 37, February 1984, pp. 17-20.

Levi, B. G., and T. Rothman, "Nuclear Winter: A Matter of Degrees," Phys. Today, Vol. 38, No. 9, September 1985, p. 58-65.

Lowe, D. C., "Atmospheric Effects of Nuclear War," New Zealand J. Sci., Vol. 27, No. 4, 1984, pp. 317-326.

Lubkin, G. B., "Atmospheric Calculations Suggest a Nuclear Winter," Phys. Today, Vol. 37, February 1984, pp. 17-20.

Luttwak, E. N., letter to the editor, "Nuclear Winter," Foreign Affairs, Vol. 62, Spring 1984, p. 997.

McNaughton, S. J., R. W. Ruess, and M. B. Coughenour, "Ecological Consequences of Nuclear War," Nature, Vol. 321, No. 6069, 29 May 1986, pp. 483-487.

Mackenzie, R., "A Simmering Scientific Debate Thaws Nuclear Winter Theory," Insight, April 21, 1986, pp. 20-23.

Maddox, J., letter to the editor, "From Santorini to Armageddon," Nature, Vol. 307, No. 5947, 12 January 1984, p. 107.

-----, letter to the editor, "Nuclear Winter Not Yet Established," Nature, Vol. 308, No. 5954, 1 March 1984, p. 11.

Malone, R. C., et al., "Influence of Solar Heating and Precipitation Scavenging on the Simulated Lifetime of Post-Nuclear War Smoke," Science, Vol. 230, No. 4723, 18 October 1985, pp. 317-319.

-----, "Nuclear Winter: Three-Dimensional Simulations Including Interactive Transport, Scavenging, and Solar Heating of Smoke," J. Geophys. Res., Vol. 91, No. D1, 20 January 1986, pp. 1039-1053.

Malone, T. F., "International Scientists on Nuclear Winter," Bull. Atomic Sci., Vol. 41, No. 11, November 1985, pp. 52-55.

Manins, P. C., "Cloud Heights and Stratospheric Injections Resulting from a Thermonuclear War," Atmos. Environ., Vol. 19, No. 8, 1985, pp. 1245-1255.

Marshall, E., letter to the editor, "Nuclear Winter Debate Heats Up," Science, Vol. 235, No. 4786, 16 January 1987, pp. 271-273.

May, M. M., letter to the editor, "Nuclear Winter: Strategic Significance," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 118-120.

Milne, D. H., and C. P. McKay, "Responses of Marine Phytoplankton Communities to a Global Atmospheric Darkening," Geol. Soc. Am. Spec. Papers, No. 190, 1982, pp. 297-304.

Nye, J. S., "Nuclear Winter and Policy Choices," Survival, Vol. 28, No. 2, March-April 1986, pp. 119-127.

Oboukhov, A. M., and G. S. Golitsyn, "Atmospheric Consequences of a Nuclear Conflict," (in Russian), Zemlya i Vselennaya, No. 5, pp. 4-7.

Penner, J. E., "Uncertainties in the Smoke Source Term for 'Nuclear Winter' Studies," Nature, Vol. 324, No. 6094, 20 November 1986, pp. 222-226.

Penner, J. E., L. C. Haselman, and L. L. Edwards, "Smoke Plume Distribution above Large Scale Fires: Implications for Simulations of 'Nuclear Winter,'" J. Clim. Appl. Meteorol., Vol. 25, No. 10, 1986, pp. 1434-1444.

Pentz, M., "The Nuclear Winter Predictions--Their Scientific Basis and Policy Implications," Radiography, Vol. 51, No. 598, July-August 1985, pp. 187-192.

Peterson, J., "Scientific Studies of the Unthinkable--The Physical and Biological Effects of Nuclear War," Ambio, Vol. 15, No. 2, 1986, pp. 60-69.

Pittock, A. B., "Nuclear Explosions and the Atmosphere," Australian Physicist, Vol. 19, 1982, pp. 189-192.

-----, "Australia and Nuclear Winter," Search, Vol. 15, No. 11-12, December 1984-January 1985, pp. 332-339.

-----, "The Effects on the Atmosphere of a Major Nuclear-Exchange," Environment, Vol. 27, No. 3, April 1985, pp. 25-29.

-----, letter to the editor, "Nuclear Winter Corroborated," Search, Vol. 16, No. 3-4, April-May 1985, pp. 61-62.

-----, "Rapid Developments on Nuclear Winter," Search, Vol. 17, No. 1-2, January-February 1986, pp. 23-24.

Plous, S., letter to the editor, "Will Deterrence Survive a Nuclear War?" Science, Vol. 225, No. 4659, 20 July 1984, p. 268.

Pollack, J. B., et al., "Environmental Effects of an Impact-Generated Dust Cloud: Implications for the Cretaceous-Tertiary Extinctions," Science, Vol. 219, No. 4582, 21 January 1983, pp. 287-289.

Porch, W. M., J. E. Penner, and D. A. Gilette, "Parametric Study of Wind Generated Supermicron Particle Effects in Large Fires," Atmos. Environ., Vol. 20, No. 5, 1986, pp. 919-929.

Postol, T. A., "Strategic Confusion: With or Without Nuclear Winter," Bull. Atomic Sci., Vol. 41, No. 2, 1985, pp. 14-17.

-----, letter to the editor, "Nuclear Winter: Strategic Significance," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 128-131.

Ramaswamy, V., and J. T. Kiehl, "Sensitivities of the Radiative Forcing Due to Large Loadings of Smoke and Dust Aerosols," J. Geophys. Res., Vol. 90, No. D3, 20 June 1985, pp. 5597-5613.

Rathjens, G. W., and R. H. Siegel, letter to the editor, "Nuclear Winter: Strategic Significance," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 123-128.

-----, letter to the editor, "The Nuclear Winter Debate," Foreign Affairs, Vol. 65, Fall 1986, pp. 169-171.

Robuck, A., letter to the editor, "Snow and Ice Feedbacks Prolong Effects of Nuclear Winter," Nature, Vol. 310, No. 5979, 23 August 1984, pp. 667-670.

Sagan, C., "Nuclear War and Climatic Catastrophe: Some Policy Implications," Foreign Affairs, Vol. 62, Winter 1983-1984, pp. 257-292.

-----, letter to the editor, "The Nuclear Winter Debate," Foreign Affairs, Vol. 65, Fall 1986, pp. 163-168.

-----, letter to the editor, "On Minimizing the Consequences of Nuclear War," Nature, Vol. 317, No. 6037, 10 October 1985, pp. 485-488.

-----, "Nuclear Winter: A Report from the World Scientific Community," Environment, Vol. 27, No. 8, October 1985, pp. 12-15, 38-39.

Salinger, M. J., "Nuclear Winter: Impacts on the Growing Season in New Zealand," J. R. Soc. New Zealand, Vol. 16, No. 4, 1986, pp. 319-333.

Scherr, S. J., "Coming to Grips with Nuclear Winter," Environment, Vol. 27, No. 8, October 1985, pp. 4-5, 40-41.

Schmidt, J. D., "Global Atmospheric Effects of Nuclear War Fires," Phys. Today, Vol. 35, October 1982, pp. 17-20.

Schneider, S. H., S. L. Thompson, and C. Covey, letter to the editor, "The Mesoscale Effects of Nuclear Winter," Nature, Vol. 320, No. 6062, 10 April 1986, pp. 491-492.

Seitz, R., letter to the editor, "Nuclear Winter," Foreign Affairs, Vol. 62, Spring 1984, pp. 998-999.

-----, letter to the editor, "Siberian Fire as 'Nuclear Winter' Guide," Nature, Vol. 323, No. 6084, 11 September 1986, pp. 116-117.

Sinclair, T. R., "Simulated Soya Bean Production during the Recovery Phase of a Nuclear Winter," Agriculture Ecosystems Environ., Vol. 17, Nos. 3-4, 1986, pp. 181-185.

Singer, S. F., letter to the editor, "Is the 'Nuclear Winter' Real?" Nature, Vol. 310, No. 5979, 23 August 1984, p. 625.

-----, letter to the editor, Science, Vol. 227, No. 4685, 25 January 1985, p. 356.

Small, R. D., and B. W. Bush, "Smoke Production from Multiple Nuclear Explosions in Nonurban Areas," Science, Vol. 229, No. 4712, 2 August 1985, pp. 465-469.

Smith, R. J., "Nuclear Winter Attracts Additional Scrutiny," Science, Vol. 225, No. 4657, 6 July 1984, pp. 30-32.

-----, "Soviets Offer Little Help (Nuclear Winter Scientific Information)," Science, Vol. 225, No. 4657, 6 July 1984, p. 31.

Sparks, B., "The Scandal of Nuclear Winter," National Rev.,
15 November 1985, pp. 28-38.

Stenchikov, G. L., "Mathematical Simulation of Climate," (in Russian),
Priroda, No. 6, 1985, pp. 39-50.

-----, "Numerical Modeling of the Nuclear Winter Taking into Account
Aerosol Spreading," (in Russian), Doklady Akademii Nauk SSSR,
Vol. 287, No. 3, 1986, pp. 598-602.

Stephens, S. L., and J. W. Birks, "After Nuclear War: Perturbations
in Atmospheric Chemistry," Bioscience, Vol. 35, October 1985, pp.
557-562.

Strong, A. E., letter to the editor, "'Nuclear Winter' Models,"
Science, Vol. 228, No. 4701, 17 May 1985, p. 792.

Tangley, L., "After Nuclear War - a Nuclear Winter," Bioscience,
Vol. 34, January 1984, pp. 6-9.

-----, "The Year After," Bioscience, Vol. 35, October 1985,
pp. 536-540.

Teller, E., letter to the editor, "Widespread After-Effects of Nuclear
War," Nature, Vol. 310, No. 5979, 23 August 1984, pp. 621-624.

Thompson, S. L., letter to the editor, "Nuclear Winter Studies,"
Science, Vol. 225, No. 4666, 7 September 1984, p. 978.

-----, "Global Interactive Transport Simulations of Nuclear War
Smoke," Nature, Vol. 317, No. 6032, 5 September 1985, pp. 35-39.

Thompson, S. L., and S. H. Schneider, letter to the editor, "The
Nuclear Winter Debate," Foreign Affairs, Vol. 65, Fall 1986,
pp. 171-178.

-----, "Nuclear Winter Reappraised," Foreign Affairs, Vol. 64, Summer
1986, pp. 981-1005.

Thompson, S. L., S. H. Schneider, and C. Covey, letter to the editor,
"Is the 'Nuclear Winter' Real?" Nature, Vol. 310, No. 5979, 23
August 1984, pp. 625-626.

Thompson, S. L., et al., "Global Climatic Consequences of Nuclear
War: Simulations with Three Dimensional Models," Ambio, Vol. 13,
No. 4, 1984, pp. 236-243.

"Towards a Mild Nuclear Winter?" letter to the editor, Nature,
Vol. 323, No. 6084, 11 September 1986, pp. 95-96.

Turco, R. P., letter to the editor, "The Nuclear Winter Debate," Foreign Affairs, Vol. 65, Fall 1986, pp. 168-169.

-----, letter to the editor, "Nuclear Winter Studies," Science, Vol. 225, No. 4666, 7 September 1984, pp. 978-979.

Turco, R. P., et al., "Nuclear Winter: Global Consequences of Multiple Nuclear Explosions," Science, Vol. 222, No. 4630, 23 December 1983, pp. 1283-1292.

-----, "The Climatic Effects of Nuclear War," Sci. Am., Vol. 251, No. 2, August 1984, pp. 33-43.

-----, "'Nuclear Winter' to Be Taken Seriously," Nature, Vol. 311, No. 5984, 27 September 1984, pp. 307-308.

-----, "On a 'Nuclear Winter'," Science, Vol. 227, No. 4685, 25 January 1985, pp. 358, 360, 362, 444.

-----, letter to the editor, "Ozone, Dust, Smoke, and Humidity in Nuclear Winter," Nature, Vol. 317, No. 6032, 5 September 1985, pp. 21-22.

Wagner, R. L. letter to the editor, "Nuclear Winter: Strategic Significance," Issues in Science Technol., Vol. 1, No. 2, 1985, pp. 131-133.

Warren, S. G., and W. J. Wiscombe, letter to the editor, "Dirty Snow after Nuclear War," Nature, Vol. 313, No. 6002, 7 February 1985, pp. 467-470.

"The World after Nuclear War: Findings of the Washington Conference on the Long-Term Worldwide Biological Consequences of Nuclear War," Disarmament, Vol. 7, Spring 1984, pp. 8-15.

II. BOOKS

Aleksandrov, V. V., and G. L. Stenchikov, "On the Modeling of the Climatic Consequences of Nuclear War," in The Proceedings on Applied Mathematics, English Transl., The Computing Centre of the USSR Academy of Sciences, Moscow, USSR, 1983.

British Medical Association, The Medical Effects of Nuclear War, John Wiley and Sons, Chichester, United Kingdom, 1983.

Chazov, Ye. I., L. A. Ilyin, and A. K. Guskova, The Danger of Nuclear War: Soviet Physicians' Viewpoint, English Transl., Novosti Press Agency Publishing House, Moscow, USSR, 1982.

----, Nuclear War: The Medical and Biological Consequences: Soviet Physicians' Viewpoint, English Transl., Novosti Press Agency Publishing House, Moscow, USSR, 1984.

Ehrlich, P. R., et al., The Cold and the Dark, the World after Nuclear War: The Conference on the Long-Term Worldwide Biological Consequences of Nuclear War, W. W. Norton and Co., New York City, 1984.

Galbally, I. E., P. J. Crutzen, and H. Rodhe, "Some Changes in the Atmosphere over Australia that May Occur Due to a Nuclear War," in M. Denborough (ed.), Australia and Nuclear War, Croom Helm, Canberra, Australia, 1983, pp. 161-185.

Ginzberg, A. S., G. S. Golitsyn, and A. A. Vasiliev, "Global Consequence of a Nuclear War: A Review of Recent Soviet Studies," in SIPRI Yearbook, International Peace Research Institute, Stockholm, Sweden, Taylor and Francis Publishers, London and Philadelphia, 1985.

Greene, O., I. Percival, and I. Ridge, Nuclear Winter: The Evidence and the Risks, Polity Press, Cambridge, United Kingdom; Basil Blackwell, New York City, 1985.

Grinspoon, L., The Long Darkness: Psychological and Moral Perspectives on Nuclear Winter, Yale University Press, New Haven, Connecticut, 1986.

Harwell, M. A., Nuclear Winter: The Human and Environmental Consequences of Nuclear War, Springer-Verlag, New York City, 1984.

Harwell, M. A., and T. C. Hutchinson, Environmental Consequences of Nuclear War, Vol. 2, Ecological and Agricultural Effects, John Wiley and Sons, Chichester, United Kingdom, 1985.

Kelleher, C. M., F. J. Kerr, and G. H. Quester (eds.), Nuclear Deterrence: New Risks, New Opportunities, Pergamon-Brassey's, Washington, D.C., 1986.

National Research Council, The Effects on the Atmosphere of a Major Nuclear Exchange, National Academy Press, National Academy of Sciences, Washington, D.C., 1984.

Obukhov, A. M., and G. S. Golitsyn, "A Nuclear War: Atmospheric Effects," P. N. Fedoseyev (ed.), in Mir i Razouzheniye, (in Russian), Nauka, Moscow, USSR, 1984, pp. 92-102.

Peterson, J., The Aftermath: The Human and Ecological Consequences of Nuclear War, Pantheon Books, New York City, 1983; also published as Nuclear War, the Aftermath, Pergamon Press, New York City, 1983. First published in Ambio, Vol. 11, No. 2-3, 1982, pp. 76-176.

Pittock, A. B., et al., Environmental Consequences of Nuclear War, Vol. 1, Physical and Atmospheric Effects, John Wiley and Sons, Chichester, United Kingdom, 1986.

Pringle, L., Nuclear War: From Hiroshima to Nuclear Winter, Enslow Publishers, Hillside, New Jersey, 1985.

Royal Society of Canada, Nuclear Winter and Associated Effects: A Canadian Appraisal of the Environmental Impact of Nuclear War, Royal Society of Canada, Ottawa, Ontario, Canada, 1985.

Sederberg, P. C., (ed.), Nuclear Winter, Deterrence and the Prevention of Nuclear War, Praeger Publishers, New York City, 1986.

Solomon, F., and R. Q. Marston, The Medical Implications of Nuclear War, National Academy Press, National Academy of Sciences, Washington, D.C., 1986.

Soviet Scientists' Committee for the Defense of Peace against Nuclear Threat, The Night After...Climatic and Biological Consequences of a Nuclear War, Mir Publishers, Moscow, USSR, 1985.

III. TECHNICAL REPORTS

American Meteorological Society, Third Conference on Climate Variations and Symposium on Contemporary Climate: 1850-2100, Boston, Massachusetts, 1985.

Anspaugh, L. R., Panel: Long-Term Consequences and Prospects for Recovery, Lawrence Livermore National Laboratory, Livermore, California, UCRL-93656, 1985 (presented at the Symposium on the Medical Implications of Nuclear War, Washington, D.C., Conference 8509194-2, 20 September 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86004241.

Bauer, E., Nuclear Winter: Smoke Generation, Deposition, and Removal, Institute for Defense Analyses, Alexandria, Virginia, IDA-M-24, December 1984. Available from the Defense Technical Information Center, Alexandria, Virginia and the National Technical Information Service, Springfield, Virginia, order No. AD-A161807.

Bing, G., Estimates of Total Combustible Material in NATO and Warsaw Pact Countries, Lawrence Livermore National Laboratory, Livermore, California, UCRL-93192, August 1985.

British Medical Association, The Long Term Environmental and Medical Effects of Nuclear War, Board of Science and Education, London, United Kingdom, 1986.

Broyles, A. A., Uncertainties in Nuclear Winter Predictions, Lawrence Livermore National Laboratory, Livermore, California, UCRL-94060, January 1986 (presented at the Forum on Nuclear Winter: Strategic and Diplomatic Implications, Blacksburg, Virginia, Conference 860369-1, 6 March 1986). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86006680.

Bush, B. W., and R. D. Small, Nuclear Winter Source Term Studies, Vol. 1, Ignition of Silo-Field Vegetation by Nuclear Weapons, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1628, February 1986 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-86-220-V1).

-----, Nuclear Winter Source-Term Studies, Vol. 2, Urban Spatial Structure and Fuel Loading, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1628, June 1986.

Chester, C. V., Nuclear War, U.S. Agriculture, and Biomass Energy, Oak Ridge National Laboratory, Oak Ridge, Tennessee, 1986 (presented at the Solar Biomass and Wind Energy Workshop, Atlanta, Georgia, Conference 860256-1, 25 February 1986). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86006215.

Chester, C. V., and A. A. Broyles, Civil Defense Implications of Nuclear Winter, Oak Ridge National Laboratory, Oak Ridge, Tennessee, DOE/OR/21400-T114, 1984. Available from the National Technical Information Service, Springfield, Virginia, order No. DE84016695.

Chester, C. V., F. C. Kornegay, and A. M. Perry, Preliminary Review of the TTAPS Nuclear Winter Scenarios. Oak Ridge National Laboratory, Oak Ridge, Tennessee, ORNL/TM-9223, July 1984. Available from the National Technical Information Service, Springfield, Virginia, order No. DE84016575.

Drew, D. M., et al., Nuclear Winter and National Security: Implications for Future Policy, Air University Press, Maxwell Air Force Base, Alabama, 1986.

Ellsaesser, H. W., trans., Man and the Biosphere: A Test of Systems Analysis and Experiments with Computers, (in Russian), Chap. 4, Sec. 4.5, "Concerning the Climatic Consequences of Nuclear War," Lawrence Livermore National Laboratory, Livermore, California, UCRL-Trans-12089, May 1986.

Feldbaum, C. B., et al., Implications of the 'Nuclear Winter' Thesis, Palomar Corporation, Washington, D.C., June 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-85-29). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A166034.

Gertler, J. J., Some Policy Implications of Nuclear Winter, The Rand Corporation, Santa Monica, California, RAND/P-7045, January 1985. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A154945.

Ghan, S. J., M. C. MacCracken, and J. J. Walton, Climatic Response to Large Summertime Injections of Smoke into the Atmosphere: Changes in Precipitation and the Hadley Circulation, Lawrence Livermore National Laboratory, Livermore, California, UCRL-92324, August 1985 (presented at the International Association for Meteorology and Atmospheric Physics, Honolulu, Hawaii, Conference 8508131-1, 5 August 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86000018.

Golitsyn, G. S., and N. A. Phillips, Possible Climatic Consequences of a Major Nuclear War, World Meteorological Organization, Geneva, Switzerland, WMO/TD No. 99, February 1986.

Goure, L., Soviet Exploitation of the 'Nuclear Winter' Hypothesis, Science Applications International, McLean, Virginia, SAIC-84/1310, June 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-84-373). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A165794.

Hahm, W. K. H., Nuclear Winter: A Review of the Models, The Rand Corporation, Santa Monica, California, RAND-P-7121-RGI, July 1985.

Hallett, J., Laboratory and Field Studies of Combustion Aerosol From the Viewpoint of the Nuclear Winter Scenario, University of Nevada, Reno, Nevada, UCRL-15822, December 1985. Available from the National Technical Information Service, Springfield, Virginia, order No. DE86014444.

Jones, E. M., and R. C. Malone, Overview of Climatic Effects of Nuclear Winter, Los Alamos Scientific Laboratory, Los Alamos, New Mexico, LA-UR-85-2686, 1985 (presented at the American Anthropological Society, Washington, D.C., Conference 851225-1, 4 December 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85015738.

Kang, S. W., and T. A. Reitter, Part of a SCOPE Report on Atmospheric Consequences of a Nuclear War, Lawrence Livermore National Laboratory, Livermore, California, UCRL-92776, May 1985 (presented at the Atmospheric Consequences of Nuclear War, Essex, United Kingdom, Conference 8506186-1, 2 June 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85016080.

Kercher, J. R., H. A. Mooney, and G. R. Grow, Research Agenda for Ecological Effects of Nuclear Winter, Lawrence Livermore National Laboratory, Livermore, California, UCRL-53588, June 1985. Available from the National Technical Information Service, Springfield, Virginia, order No. DE86015565.

Kirkwood, J., J. Sanborn, and R. P. Turco, Contribution of Model Parameter Uncertainties in the TTAPS Analysis of Nuclear Winter, R & D Associates, Marina del Rey, California, RDA-TR-130000-005, September 1985.

Knox, J. B., Microphysical/Mesoscale Aspects of Nuclear Winter and New Directions in Assessments, Lawrence Livermore National Laboratory, Livermore, California, UCRL-91359, June 1985 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8408122-5, 19 August 1984). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85013479.

-----, Climatic Consequences of Nuclear War: New Findings, 1985, Lawrence Livermore National Laboratory, Livermore, California, UCRL-93768, December 1985 (presented at the International Seminar on Nuclear War, Erice, Italy, Conference 8508154-1, 19 August 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86004483.

-----, Climatic Consequences of Nuclear War: Working Group No. 1, Lawrence Livermore National Laboratory, Livermore, California, UCRL-93760, December 1985 (presented at the International Seminar on Nuclear War, Erice, Italy, Conference 8508154-2, 19 August 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86004243.

-----, Personal Reflections on the Diplomatic and Policy Implications of the Environmental Consequences of Nuclear War: A Summary Statement, Lawrence Livermore National Laboratory, Livermore, California, UCRL-94059, January 1986 (presented at the Forum on Nuclear Winter: Strategic and Diplomatic Implications, Blacksburg, Virginia, Conference 860369-2, 6 March 1986). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86006535.

Levi, B. G., and T. Rothman, Nuclear Winter: A Review of the Key Factors, Center for Energy and Environmental Studies, Princeton University, Princeton, New Jersey, PU/CEES Report 197, March 1986.

Luther, F. M., Uncertainties in the Radiative Properties of Smoke and Their Effects on Climate Assessments, Lawrence Livermore National Laboratory, Livermore, California, UCRL-92942, July 1985 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8408122-6, 19 August 1984). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85015187.

MacCracken, M. C., Nuclear War: Preliminary Estimates of the Climatic Effects of a Nuclear Exchange, Lawrence Livermore National Laboratory, Livermore, California, UCRL-89770, October 1983 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8308134-3, 16 August 1983). Available from the National Technical Information Service, Springfield, Virginia, order No. DE84002729.

-----, Global Atmospheric Effects of Nuclear War, Defense Programs, Washington, D.C., Report 10-35, 1986.

MacCracken, M. C., and J. J. Walton, Effects of Interactive Transport and Scavenging of Smoke on the Calculated Temperature Change Resulting from Large Amounts of Smoke, Lawrence Livermore National Laboratory, Livermore, California, UCRL-91446, December 1984 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8408122-2, 19 August 1984). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85006450.

Malone, R. C., Atmospheric Perturbations of Large-Scale Nuclear War, Los Alamos Scientific Laboratory, Los Alamos, New Mexico, LA-UR-85-3671, 1985 (presented at the Symposium on the Medical Implications of Nuclear War, Washington, D.C., Conference 8509194-1, 20 September 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86002410.

McCartor, G., et al., Infrared Issues for the Nuclear Winter Phenomenon, Mission Research Corporation, Santa Barbara, California, MRC-R-955, October 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-85-312). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A168717.

Mettlach, T. R., Changes in the Ocean Mixed Layer Following Extraordinary Atmospheric Forcing, Naval Postgraduate School, Monterey, California, December 1985. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A164703.

National Climate Program Office, Report to the Office of Science Technology and Policy: Interagency Research Report for Assessing Climatic Effects of Nuclear War, Rockville, Maryland, February 1985. Available from the National Technical Information Service, Springfield, Virginia, order No. PB86-209749.

Penner, J. E., Tropospheric Response to a Nuclear Exchange, Lawrence Livermore National Laboratory, Livermore, California, UCRL-89956, October 1983 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8308134-2, 16 August 1983). Available from the National Technical Information Service, Springfield, Virginia, order No. DE84002716.

-----, Progress in Developing the Smoke Source Term for "Nuclear Winter" Studies: Major Uncertainties, Lawrence Livermore National Laboratory, Livermore, California, UCRL-94226, March 1986 (presented at the Defense Nuclear Agency Program Technical Review, Moffett Field, California, Conference 860280-1, 25 February 1986). Available from the National Technical Information Service, Springfield, Virginia, order No. DE86008021.

Penner, J. E., and L. C. Haselman, Smoke Inputs to Climate Models: Optical Properties and Height Distribution for Nuclear Winter Studies, Lawrence Livermore National Laboratory, Livermore, California, UCRL-92523, April 1985 (presented at the International Conference on Nuclear War, Erice, Italy, Conference 8408122-3, 19 August 1984). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85011363.

Penner, J. E., L. C. Haselman, and L. L. Edwards, Buoyant Plume Calculations, Lawrence Livermore National Laboratory, Livermore, California, UCRL-90915, January 1985 (presented at the 23rd American Institute of Aeronautics and Astronautics Aerospace Sciences Meeting, Reno, Nevada, Conference 850136-5, 14 January 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85007255.

Pontier, P. Q., Effect of Dust Models on Global Nuclear Winter, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, AFIT/GNE/ENP/86M-11, March 1986. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A172784.

Reitter, T. A., S. W. Kang, and A. N. Takata, Toward Quantifying the Source Term for Predicting Global Climatic Effects of Nuclear War: Applications of Urban Fire Codes, Lawrence Livermore National Laboratory, Livermore, California, UCRL-53647, June 1985. Available from the National Technical Information Service, Springfield, Virginia, order No. DE85017456.

Reitter, T. A., A. N. Takata, and S. W. Kang, Fire Initiation and Spread in Urban Areas Due to Nuclear Attack, Lawrence Livermore National Laboratory, Livermore, California, UCRL-91268, September 1984 (presented at the Conference on Large Scale Fire Phenomenology, Gaithersburg, Maryland, Conference 8409178-1, 10 September 1984). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85003140.

Romero, P. J., Nuclear Winter: Implications for U.S. and Soviet Nuclear Strategy, The Rand Corporation, Santa Monica, California, RAND/P-7009-RGI, December 1984. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A154861.

Slingo, A., and P. Goldsmith, "Nuclear Winter: Calculations of the Shortwave Radiative Effects of Soot Aerosols," in Dynamic Climatology Technical Note, Meteorological Office, Bracknell, United Kingdom, No. 24, 1985.

Small, R. D., and B. W. Bush, Smoke Produced by Non-Urban Target-Area Fires Following a Nuclear Exchange, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1515, April 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-85-293-A).

Small, R. D., J. M. Blair, and K. E. Heikes, Clouds Formed by Large Area Fires, Pacific-Sierra Research Corporation, Los Angeles, California, February 1987 (presented at the 3rd International Symposium on Stratified Flows, Pasadena, California, 3 February 1987).

Turco, R. P., Summary of the DNA Global Effects Meeting, R & D Associates, Marina del Rey, California, March 1986.

U.S. General Accounting Office, Nuclear Winter: Uncertainties Surround the Long-Term Effects of Nuclear War: Report to the Congress, Washington, D.C., GAO/NSIAD-86-62, 1986.

Verstraete, M. M., Glossary on the Environmental Impact of a Nuclear War, National Center for Atmospheric Research, Boulder, Colorado, NCAR/TN-264+IA, February 1986. Available from the National Technical Information Service, Springfield, Virginia, order No. PB86-180296.

Weinberger, C. A., The Potential Effects of Nuclear War on the Climate, Department of Defense, Washington, D.C., March 1985.

World Health Organization, Effects of Nuclear War on Health and Health Sciences, World Health Organization, Geneva, Switzerland, A36.12, 1983.

Worrest, R. C., Responses and Effects of UV-G, Oregon State University, Corvallis, Oregon, 1985 (subsequently published in Environmental Consequences of Nuclear War, Vol. 2, Ecological and Agricultural Effects, Section 3.2, December 1985, pp. 174-184). Available from the National Technical Information Service, Springfield, Virginia, order No. PB86-199593.

IV. FURTHER READING

Arkin, W. M., and R. W. Fieldhouse, Nuclear Battlefields: Global Links in the Arms Race, Ballinger, Cambridge, Massachusetts, 1985.

Arkin, W. M., F. Von Hippel, and B. G. Levi, "The Consequences of a 'Limited' Nuclear War in East and West Germany," Ambio, Vol. 11, No. 2-3, 1982, pp. 163-173.

Ayres, R. U., Environmental Effects of Nuclear Weapons, Vol. 1, Hudson Institute, Croton-on-Hudson, New York, HI-518-RR-Vol-1, December 1965. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-632279.

----, Environmental Effects of Nuclear Weapons, Vol. 2, Hudson Institute, Croton-on-Hudson, New York, HI-518-RR-Vol-2, December 1965. Available from the Defense Technical Information Center, Alexandria, Virginia and the National Technical Information Service, Springfield, Virginia, order No. AD-632280.

----, Environmental Effects of Nuclear Weapons, Vol. 3, Hudson Institute, Croton-on-Hudson, New York, HI-518-RR-Vol-3, December 1965. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-632281.

Barnaby, F., "The Effects of a Global Nuclear War: The Arsenals," Ambio, Vol. 11, No. 2-3, 1982, pp. 76-83.

Barnaby, F., and J. Rotblat, "The Effects of Nuclear Weapons," Ambio, Vol. 11, No. 2-3, 1982, pp. 84-93.

Barnaby, F., et al., "Reference Scenario: How a Nuclear War Might Be Fought," Ambio, Vol. 11, No. 2-3, 1982, pp. 94-99.

Batten, E. S., The Effects of Nuclear War on the Atmosphere and Climate, The Rand Corporation, Santa Monica, California, RM-4989-TAB, 1966.

Bondietti, E. A., "Effects on Agriculture," Vol. 11, No. 2-3, 1982, pp. 138-142.

Boville, B. A., "The Thermal Balance of the NCAR Community Climate Model," J. Atmos. Sci., Vol. 42, No. 7, April 1, 1985, pp. 695-709.

Brode, H. L., and R. D. Small, Fire Damage and Strategic Targeting, Pacific-Sierra Research Corporation, Los Angeles, California, Note 567, 1983.

Broido, A., "Mass Fires Following Nuclear Attack," Bull. Atomic Sci., Vol. 16, No. 10, December 1960, pp. 409-413.

Carrier, G. F., F. E. Fendell, and P. S. Feldman, "Big Fires," Combustion Sci. Technol., Vol. 39, 1984, pp. 135-162.

-----, Firestorms, TRW, Inc., Redondo Beach, California, TRW-38163-6001-UT-00, April 1982 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-81-102). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A131147.

Carrier, G. F., F. E. Fendell, and C. T. Hsu, Modeling of Aspects of Large-Area Fires, TRW Inc., Redondo Beach, California, TRW-42504-6002-UT-00, April 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-85-100). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A168809.

Chandler, C. C., T. G. Storey, and C. D. Tangren, Predictions of Fire Spread Following Nuclear Explosions, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, PSW-5, 1963.

Chazov, E. I., and M. E. Vartanian, "Effects on Human Behavior," Ambio, Vol. 11, No. 2-3, 1982, pp. 158-160.

Chervin, R. M., "Estimates of First- and Second-Moment Climate Statistics in GCM Simulated Climate Ensembles," J. Atmos. Sci., Vol. 37, No. 9, September 1980, pp. 1889-1902.

-----, "On the Comparison of Observed and GCM Simulated Climate Ensembles," J. Atmos. Sci., Vol. 38, No. 5, May 1981, pp. 885-901.

-----, "Interannual Variability and Seasonal Climate Predictability," J. Atmos. Sci., Vol. 43, No. 3, 1 February 1986, pp. 233-251.

Chervin, R. M., and S. H. Schneider, "On Determining the Statistical Significance of Climate Experiments with General Circulation Models," J. Atmos. Sci., Vol. 33, No. 3, March 1976, pp. 405-412.

Chivian, E., et al. (eds.), Last Aid: The Medical Dimensions of Nuclear War, W. H. Freeman and Company, San Francisco, California, 1982.

Coggle, J. E., and P. J. Lindop, "Medical Consequences of Radiation Following a Global Nuclear War," Ambio, Vol. 11, No. 2-3, 1982, pp. 106-113.

Cotton, W. R., et al., "The Colorado State University Three-Dimensional Cloud/Mesoscale Model--1982, Part 2, an Ice Phase Parameterization," J. Rech. Atmos., Vol. 16, 1982, pp. 295-320.

-----, Model Cloud Relationships, Colorado State University, Fort Collins, Colorado, AFGL-TR-84-0028, October 1983. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A142690.

Gates, W. L., and M. E. Schlesinger, "Numerical Simulation of the January and July Global Climate with a Two-Level Atmospheric Model," J. Atmos. Sci., Vol. 34, No. 1, January 1977, pp. 36-76.

Gates, W. L., et al., A Documentation of the Mintz-Arakawa Two-Level Atmospheric General Circulation Model, The Rand Corporation, Santa Monica, California, R-877-ARPA, December 1971. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-740093.

Geisler, J. E., E. J. Pitcher, and R. C. Malone, "Rotating-Fluid Experiments with an Atmospheric General Circulation Model," J. Geophys. Res., Vol. 88, 1983, pp. 9706-9716.

Ghan, S. J., M. C. MacCracken, and J. J. Walton, Climatic Response to Large Summertime Injections of Smoke into the Atmosphere: Changes in Precipitation and the Hadley Circulation, Lawrence Livermore National Laboratory, Livermore, California, UCRL-92324, August 1985 (presented at the International Association for Meteorology and Atmospheric Physics, Honolulu, Hawaii, Conference 8508131-1, 5 August 1985). Available from the National Technical Information Service, order No. DE86000018.

Ghan, S. J., et al., A Documentation of the OSU Two-Level Atmospheric General Circulation Model, Climatic Research Institute, Oregon State University, Corvallis, Oregon, Report 61, 1982.

Glasstone, S., and P. J. Dolan, The Effects of Nuclear Weapons, 3d ed., U.S. Government Printing Office, Washington, D.C., 1977.

Hassing, P. J., and M. Rosenblatt, Firestorm Formation and Environment Characteristics after a Large-Yield Nuclear Burst, Pacific-Sierra Research Corporation, Los Angeles, California, May 1983 (presented at the Asilomar Conference on Fire and Blast Effects of Nuclear Weapons, Pacific Grove, California, AD-A132780, 30 May to 3 June, 1983). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-P001803.

Hjort, H. W., "The Impact on Global Food Supplies," Ambio, Vol. 11, No. 2-3, 1982, pp. 153-157.

Huschke, R. E., The Simultaneous Flammability of Wildland Fuels in the United States, The Rand Corporation, Santa Monica, California, RM-5073-TAB, 1966.

Ishikawa, E., and D. L. Swain, Hiroshima and Nagasaki: The Physical, Medical and Social Effects of the Atomic Bombings. Translated by Basic Books, New York City, 1981.

Izrael, Y. A., V. N. Petrov, and D. N. Severov, "On the Impact of the Atmospheric Nuclear Explosions on the Ozone Content of the Atmosphere," (in Russian), Meteorologiya i Gidrologiya, No. 9, 1983, pp. 5-13.

Johnston, H., G. Whitten, and J. W. Birks, "Effect of Nuclear Explosions on Stratospheric Nitric Oxide and Ozone," J. Geophys. Res., Vol. 78, No. 27, 20 September 1973, pp. 6107-6135.

Kang, S. W., T. A. Reitter, and A. N. Takata, Analysis of Large Urban Fires, Lawrence Livermore National Laboratory, Livermore, California, UCRL-90920, November 1980 (presented at the American Institute of Astronautics and Aeronautics Aerospace Sciences Meeting, Reno, Nevada, Conference 850136-1, 14 January 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85003453.

Kerr, J. W., et al., Nuclear Weapons Effects in a Forest Environment-- Thermal and Fire, General Electric Company, Santa Barbara, California, DASIAC-SR-112, July 1971 (subsequently published by the Defense Nuclear Agency, Washington, D.C., TTCP-N2:TR-2-70). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-892886.

Larson, D. A., and R. D. Small, Analysis of the Large Urban Fire Environment, Part 1, Theory, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1210, July 1982. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A125399.

-----, Analysis of the Large Urban Fire Environment, Part 2, Parametric Analysis and Model City Simulations, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1210, November 1982. Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-A125400.

-----, Large Urban Fire Environment: Trends and Model City Predictions, Pacific-Sierra Research Corporation, Los Angeles, California, 1982 (presented at the Asilomar Conference on Fire and Blast Effects of Nuclear Weapons, Pacific Grove, California, AD-A132780, 30 May to 3 June 1983). Available from the Defense Technical Information Center, Alexandria, Virginia, and the National Technical Information Service, Springfield, Virginia, order No. AD-P001806.

Laulan, Y., "Economic Consequences: Back to the Dark Ages," Ambio, Vol. 11, No. 2-3, 1982, pp. 149-152.

Malone, R. C., et al., Structure and Forcing of Teleconnection Patterns Occurring in General Circulation Model Simulations, Los Alamos Scientific Laboratory, Los Alamos, New Mexico, LA-UR-84-3447, 1984 (presented at the Conference on Climate Variations, Los Angeles, California, Conference 850132-1, 8 January 1985). Available from the National Technical Information Service, Springfield, Virginia, order No. DE85002434.

-----, "The Simulation of Stationary and Transient Geopotential-Height Eddies in January and July with a Spectral General Circulation Model," J. Atmos. Sci., Vol. 41, No. 8, 15 April 1984, pp. 1394-1419.

Martin and Associates, Attack-Environment Manual for Civil-Defense Planners, Chap. 3, "What the Planner Needs to Know about Fire Initiation and Spread," Redwood City, California, UCRL-15544, April 1983. Available from the National Technical Information Service, Springfield, Virginia, order No. DE83015611.

Middleton, H., "Epidemiology: The Future is Sickness and Death," Ambio, Vol. 11, No. 2-3, 1982, pp. 100-105.

National Research Council, Long-Term Worldwide Effects of Changes in Stratospheric Ozone: An Update, National Academy Press, National Academy of Science, Washington, D.C., 1975.

-----, Long-Term Effects of Multiple Nuclear Weapons Detonations, National Academy Press, National Academy of Sciences, Washington, D.C., October 1975. Microfiche copy available from the National Technical Information Services, Springfield, Virginia, order No. PB-279976.

Office of Technology Assessment, The Effects of Nuclear War, Government Printing Office, Washington, D.C., 1979.

Patterson, E. M., and C. K. McMahon, "Absorption Characteristics of Forest Fire Particulate Matter," Atmos. Environ., Vol. 18, No. 11, 1984, pp. 2541-2551.

Patterson, E. M., C. K. McMahon, and D. E. Ward, "Absorption Properties and Graphitic Carbon Emission Factors of Forest Fire Aerosols," Geophys. Res. Lett., Vol. 13, No. 2, February 1986, pp. 129-132.

Pitcher, E. J., et al., "January and July Simulations with a Spectral General Circulation Model," J. Atmos. Sci., Vol. 40, No. 3, March 1983, pp. 580-604.

Pruppacher, H. R., and J. D. Klett, Microphysics of Clouds and Precipitation, Dordrecht, Holland; Reidel Publishing, Boston, 1980.

Ramanathan, V., et al., "The Response of a Spectral General Circulation Model to Refinements in Radiative Processes," J. Atmos. Sci., Vol. 40, No. 3, March 1983, pp. 605-630.

Rasbash, D. J., and B. T. Pratt, "Estimation of the Smoke Produced in Fires," Fire Safety J., Vol. 2, 1979/1980, pp. 23-37.

Schlesinger, M. E., and W. L. Gates, "The January and July Performance of the OSU Two-Level Atmospheric General Circulation Model," J. Atmos. Sci., Vol. 37, No. 9, September 1980, pp. 1914-1943.

Scrimshaw, N. S., "Food, Nutrition and Nuclear War," N. Engl. J. Med., Vol. 311, No. 4, July 26, 1984, pp. 272-276.

Seymour, A. H., "The Impact on Ocean Ecosystems," Ambio, Vol. 11, No. 2-3, 1982, pp. 132-137.

Sharfman, P., et al., Effects of Nuclear Weapons, United States Congress Office of Technology Assessment, Washington, D.C., OTA-NS-89, 1979. Available from the National Technical Information Service, Springfield, Virginia, order No. PB-296946.

Shostakovitch, V. B., "Forest Conflagrations in Siberia with Special Reference to the Fires of 1915," J. For., Vol. 23, 1925, pp. 365-371.

Small, R. D., and D. A. Larson, "Velocity Fields Generated by Large Fires," Israel J. Technol., February 1984, pp. 128-139.

Small, R. D., D. A. Larson, and H. L. Brode, "Asymptotically Large Area Fires," J. Heat Trans., Vol. 106, 1984, pp. 318-324.

Small, R. D., D. Remetch, and H. L. Brode, Atmospheric Motions from Large Fires, AIAA Paper 85-0458, presented at the American Institute of Aeronautics and Astronautics Aerospace Sciences Meeting, Reno, Nevada, January 1985.

Tewarson, A., Particulate Formation in Fires, Factory Mutual Research Corporation, Norwood, Massachusetts, RC84-TP-20, 1984 (presented at the Conference on Large Scale Fire Phenomenology, 10-13 September 1984).

Toon, O. B., et al., "Evolution of an Impact-Generated Dust Cloud and its Effects on the Atmosphere," Geol. Soc. Am. Spec. Papers, No. 190, 1982, pp. 187-200.

Tripoli, G. J., and W. R. Cotton, "The Colorado State University Three-Dimensional Cloud/Mesoscale Model--1981," Part 1, "General Theoretical Framework and Sensitivity Experiments," J. Rech. Atmos., Vol. 16, 1982, pp. 185-220.

Walton, J. J., and M. C. MacCracken, Preliminary Report on the Global Transport Model GRANTOUR, Lawrence Livermore National Laboratory, Livermore, California, UCID-19985, January 1984. Available from the National Technical Information Service, Springfield, Virginia, order No. DE84005596.

Washington, W. M., Documentation for the Community Climate Model (CCM) Version 0, National Center for Atmospheric Research, Boulder, Colorado, 1982. Available from the National Technical Information Service, Springfield, Virginia, order No. PB82-194192.

Weihs, D., and R. D. Small, Interactions and Spreading of Adjacent Large-Area Fires, Pacific-Sierra Research Corporation, Los Angeles, California, Note 719, March 1986 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-86-214).

-----, Swirl Induced By Large Area Fires, Pacific-Sierra Research Corporation, Los Angeles, California, Note 676, October 1985 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-86-80).

Wetzel, K. G., "Effects on Global Supplies of Freshwater," Ambio, Vol. 11, No. 2-3, 1982, pp. 126-131.

Wexler, H., "The Great Smoke Pall-September 24-30, 1950," Weatherwise, Vol. 3, No. 6, December 1950, pp. 129-134, 142.

Whicker, F. W., and V. Schultz, Radioecology: Nuclear Energy and the Environment, 2 vols., CRC Press, Boca Raton, Florida, 1982.

Williamson, D. L., Description of NCAR Community Climate Model (CCMOB), National Center for Atmospheric Research, Boulder, Colorado, TN-210+STR, 1983.

Wood, L., Concerning the Implications of Large-Scale Nuclear War: The Actual Fate of the Earth, Lawrence Livermore National Laboratory, Livermore, California, UCRL-89662, 1983 (presented at the International Conference on the Prevention of Nuclear War, Erice, Italy, Conference 8208154-1, 19 August 1982).

Woodie, W. L., D. Remetch, and R. D. Small, Fire Spread from Tactical Nuclear Weapons in Battlefield Environments, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1422, July 1984, (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-84-308-V2).

-----, Battlefield Fires from Tactical Nuclear Weapons, Pacific-Sierra Research Corporation, Los Angeles, California, Report 1453, December 1984 (subsequently published by the Defense Nuclear Agency, Washington, D.C., DNA-TR-86-235).

Woodwell, G. M., "The Biotic Effects of Ionizing Radiation," Ambio, Vol. 11, No. 2-3, 1982, pp. 143-148.